View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by The Management Univesity of Africa Repository

EFFECTS OF INVENTORY MANAGEMENT TECHINIQUES ON THE PERFORMANCE OF COUNTY GOVERNMENTS: (CASE STUDY OF COUNTY GOVERNMENT OF LAIKIPIA)

RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR DEGREE IN MANAGEMENT AND LEADERSHIP OF THE MANAGEMENT UNIVERSITY OF AFRICA.

OCTOBER 2017

DECLARATION

Declaration by the Student

A declare that this research project is my original work and has not been presented for award of bachelor degree in any institution.

Name ……

Signature…… Date …….

Declaration by the Supervisor

The research project has been submitted for examination with authorization of Management University of Africa supervisor

Name……..

Signature …….. Date ……

DEDICATION

I dedicate this work to my daughter and wife because of their encouragement and financial support during the period of research.

ACKNOWLEDGEMENT

I would like to thank all who have contributed to this work in one way or another. I acknowledge my supervisor, Dr. Emmanuel Awour and all my Lecturers and close friends, co-workers and everyone who directly and indirectly contributed to the successful completion of this research project.

ABSTRACT

The study is about the effects of inventory management technique on County Government of Laikipia. The study cites some of the possible benefits that organization enjoys by use of various inventory management techniques. The main inventory management techniques that the study has focused on are: Just in Time, Vendor Managed Inventory, Enterprise Resource Planning inventory management and demand forecasting techniques. The study shows how the inventory management techniques lead to increased performance in County Government of Laikipia. The study was carried out in the procurement and store department of County Government of Laikipia. The result of the study will not only benefit County Government of Laikipia but also other organizations where they have not implemented these techniques in the control and the management of inventory. The study adopted a descriptive research design. The study had target population of 60 employees of the County Government of Laikipia working in the procurement department ii the whole county. The study has used a census method because the targeted population was found to be small hence there is no need for sampling. From the study the researcher suggest that all organizations should implement these inventory management techniques so as to accrue the benefits resulting from them. Some these benefits are lower inventory cost result from lower inventory held, saving of time due to the low inventory level and improved organizational efficiency due to low duplication of the activities within the organization. Other benefits are; improved communication, better improved relationship between an organization and its suppliers as well as lower administration costs.

TABLE OF CONTENTS

Page

LIST OF FIGURES PAGE

LIST OF TABLES

Page

ABREVIATIONS AND ACCRONYMS

APIS:	American Production and Inventory Society
CGL:	County Government of Laikipia
ERP:	enterprise resource planning
GoK:	Government of Kenya
JIT:	Just in time
VMI:	Vendor managed inventory
WIP:	Work in progress

CHAPTER ONE

1.0 Introduction

Chapter one discusses the background of the study, problem statement of the study, the research objections and questions, justifications of the study.

1.1 Background to the Study

(Lyson and Gilingham, 2003) defined inventory as the value or amount of raw materials, and finished goods that are stored for use in future. Therefore, every organization holds some type of inventory. In many organizations inventory is the major assets. American Production Society defined inventory management as the field of management that deals with planning and controlling stocks. The said that the main purpose of inventory management is to keep stock in specific order. Inventory Management Techniques are inventory management techniques developed to manage inventory efficiently and effectively. The main aim of the methods is to reduce cost associated with inventory, enhance collaboration between various organizational departments, help in reducing investment in inventory, enhance quick retrieval of inventory and management of movement in inventory as well as enhancing relationship between the supplier and the organization among other(Lyons and Gillingham, 2003).

With time inventory management technique are being changed over time just with aim of cutting down cost and increasing efficiency. Some of the techniques which have been developed are; vender managed inventory which is common among chain stores, Enterprise Resource Planning (ERP) software which has helped organizations to be able not only to track inventory easily but also to integrate different departments within organization. Forecasting for future demand is another method that an organization can adopt to management of its inventory in the future .A study was undertaken between 1981 and 2000 in the US to analyze inventory management and was found out that organizations that kept too much inventory in their warehouse operated an inefficient supply chain, while those that kept very few inventory in their warehouse were very

efficient (Lai and Cheng, 2009). Thus, it was found out that keeping balanced inventory is good and it enables an organization operate minimal expenses of holding costs as well as keep setup cost at bare minimum, eliminate unwanted lead time and produce goods as per customers order(Lai and Cheng, 2009). Therefore modern inventory management will continually bring added advantage to the organization.

1.2 Problem Statement

Inventory in County Government of Laikipia should be managed efficiently and effectively. No County Government should be experiencing problems in the management of inventory. They should not over or under stock inventory and the costs associated with inventory should be as low as possible. Inventory levels should be known at any given time. This can only be achieved through the use of inventory management techniques.

However, most of these institutions do not use inventory management techniques. This is making most of them to incur unnecessary cost resulting from poor inventory management. To great extent some have experienced poor performance due to shortage of some necessary material which is vital to keep the organizational functioning.

If this trend continues many County Governments such as that of Laikipia will continue to suffer from inefficiency and ineffectiveness due to lack of smooth flow of the necessary inventory due to poor inventory management.

1.3 Objectives of the Study

1.3.1 General objectives

The general objective of this study was to establish the effects of inventory management system adopted by the organization on performance.

1.3.2 Specific objectives

The following are the specific study objectives:

i. To examine the effects of Justin Time inventory management techniques on the performance of the County Government of Laikipia.

ii. To examine the effects of Vendor Managed Inventory techniques of the performance of the County Government of Laikipia.

iii. To investigate the effects of Enterprise Resource Planning performance in County Government of Laikipia

iv. To investigate the effects of Forecasting for Demand on the performance of the County government of Laikipia

1.4 Research Questions

The following were the research questions:

i. How does Justin Time inventory management technique affect performance in County Government of Laikipia?

ii. How does the Vendor managed inventory technique affect performance of the County Government of Laikipia?

iii. How does Enterprise Resource Planning inventory management technique affect performance in of the County Government of Laikipia?

iv. How does Demand Forecasting affect performance of the County government of Laikipia

1.5 Justification/Significance of the Study

The main purpose of undertaking the study was to find out whether modern inventory management techniques can facilitate in improving the performance of a County Government. This study is significant in the following ways to different participant:

i. County Governments

It will enable the management of these institutions to know the various available methods of inventory management and how they can be used to ensure these institutions 'performance improves.

ii. National Government:

It will enable the government to be able to come up with policies which can be used in the management of inventory in learning public institutions.

iii. Management scholars

The study will help the management scholars to know some of the inventory management techniques and how they can be able to use them in the management of inventory for different organizations

1.6 Scope of the Study

This study is limited to the inventory techniques of demand forecasting, just in time inventory management system, vendor managed inventory management system and enterprise resource planning inventory management system and how each of these factors affect performance of the organization. The study is limited to the last three years and how the four factors have affected the performance of the County Government of Laikipia in those last three years. Other inventory management techniques are not part of the study.

1.7 Chapter Summary

The chapter has given a concise background to the research problem under study. The chapter has also discussed the research objectives, and given out the four questions that underpin the study. The chapter also discusses the scope of the study where the study has limited itself to studying the effects of the four mentioned inventory management techniques and how each of these factors align with overall organizational performance. This chapter maintained on the line of background of the study, statement of problem followed by research questions after which we have the objectives and the significance of the study ,limitations and justifications of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Chapter two focused on the review of literature on the basis of the research project ensuring relevance to the research problem. The review was undertaken to bring out the gaps and enhance knowledge of better and efficient ways of managing inventory and improving institution performance. It is also important to institutional heads and professionals concerned with the management of inventories in various institutions.

2.1 Theoretical Literature Review

2.1.1 Constraints theory

(Eliyaum M, 1994) introduced the theory of constrains. Theory of constrains outlines any achievable goals. It mainly focuses on the best management capacity and constrains buildings. Theory of constrains can make management to improve on its activities. This is not limited to County Government of Laikipia if it uses the best stock systems. Many institutions have tried their best to achieve their goals; however technology and enough man power have limited them. Therefore this study suggests that by learning institutions controlling these constraints it can be able to improve its performance.

Instruments of measuring theory are tied on relationship between the control systems and operating systems. This is the reasons as to why theory of constrains is emphasized on improving inventory and stock systems.

2.2 Empirical review

2.2.1 Just in Time and performance of the County Government

(Carlson, 2002), viewed inventory management as technique whose main purpose is to ensure material are placed in the right place and with order. According to Lysons and Gillingham (2003) the potential benefits of just in time to an organization are; quality, maintenance, proper design, administrative efficiency and high production. Monden

(1993) argues that just in time helps in reduction of wastes. These wastes may include the transportation waste, waste from product defects, inventory waste etc.

He further added that in order to ensure good relationship among organizations and suppliers, the process should be efficient and in stable conditions.

According to Lysons and Gillingham(2003), by using just in time technique, there will be greater productivity thus reduced rework, reduce inspection because the raw materials that will be brought will be of good quality thus no need to inspect.

According to the study in the US conducted in 2000 concerning inventory management, it was found that most firms keep much stock in their store-room. The study found that these stores were not in good status to keep stock for a long period of time. Therefore as the inventory reduces the organization becomes more efficient and therefore better services.

According to Kumar and Suresh (2008), Just in time technique of inventory management bring about the following benefit to an organization; production cost is greatly reduced due to elimination of waste he also indicate that the productivity of the organization will also greatly improve due to system flexibility and administrative ease as well as management simplicity. Therefore it can be noted that with just in time organization may incur very minimal cost to manage its inventory.

2.2.2 Vendor Managed Inventory and performance of the County Government

According to Marayan and Subramanian (2008) vendor managed inventory can be defined to be way of improving supply enactment in which supply firm is responsible for ensuring customers are in order. (Irungu and Wanjau, 2011) defined inventory management as the process of involving inventory management level.

Fram (2003) also state that the main aspect in vender managed inventory is a well-managed communication from the beginning of the business relations between the supplier and the customer.

Centinkaya and lee (2000) found that the main advantage of these techniques was great reduction in inventory carrying cost and stock out problems. It also synchronize both

inventory and transportation decisions. Therefore it helped in reducing cost such space cost, tying up capital in the inventory as well as insurance cost associated with holding inventory. Angulo, et al (2004) also noted that VMI systems resulted to lowered inventory level , faster inventory turnovers, reduced management cost, zero obsolesce, increased sale and reduced out of stock costs among others

Marayan and Subramanian (2008) note that the main benefits a firm will accrue from the use of vender managed inventory are; inventory reduction across the supply chain this will lead to reduction in secured supply delivered items. They also noted that Vendor Managed Inventory systems assist distributer to make best decisions in the line of production. According to Waller (2009) VMI result to lower inventory cost and lead to better synchronization of replenishment planning. This will result to high performance of the County Government of Laikipia. Users receive improved service levels, and cash flows, and vendors enjoy better visibility of changing demand and greater customer loyalty (Emmett & Granville, 2007).

According to Farrington and Lysons (2006), it leads to reduced administrative costs due to elimination of the need to monitor inventory levels, paper cost and reduced re-ordering costs. This can lead to significant reductions in inventory holding right through the supply chain (Rushton, Croucher, & Baker, 2011). Therefore it can be noted that with vender managed inventory organization are able to manage inventory cost by ensuring it is at minimal. The resultant benefit can be high customer satisfaction and better organizational performance

2.2.3 Enterprise Resource Planning and performance of the County Government

Enterprise Resource Planning is business system or application that joins all department of a business (Ken et al 2010). Kitheka 2010 noted that Enterprise Resource Planning is useful to all firms that allow directors to view what is taking place. He further noted that information used by these systems can be easily shared and traced. In the past the use of ERP was just within the organization. However, according to Kitheka 2010, advancement of technology and electronic business as improved the supply chain process. He further noted that Enterprise Resource Planning technology could take merely a long period of time before staffs using them are able to fully use them. This is because there is a short

period of time remaining to learn how they operate, bearing in mind that they also have other duties to do (Willcocks, et al, 1999).

According to Balsmeier and Nagar (2002), many organizations are responding to Enterprise Resource Planning because of competitions with customers. According to Frost and Suvilian (2008), there existed a stiff competition in India as a result of Enterprise Resource Planning. They noted that companies that used Enterprise Resource Planning got a lot of profits compared to organizations that never used ERP Systems.

When connecting Enterprise Resource Planning Systems you have to make sure both business are working well (Behesthti, 2006). This is because of some business raising issues during delivery. (Murray, 2006). Heck (2009), Argue that the potential benefits to organization that use ERP in inventory management are; improved planning due to linking between different departments. Enterprise Resource Planning systems may support the buying process due to registered distributers are easily traceable.ERP Systems can also make monitor easily turnover stock and also lead to lower inventory associated with cost due to proper stock level.

2.2.4 Demand Forecasting

According to Stevens (2004), he defined demand forecasting as the way of forecasting quantity of commodity bought of the firm. This means that demand is controlled both by internal and external factors.

On his part Heck (2009), says that the demand of certain commodities are affected by several factors. In business field, demand is affected by many risks. These include technology, prices of the commodities, future uncertainties of demand to increase, recovery as well as government interventions.

Milgate and Murray (2008) argues that future forecasting on demand of a commodity assists organizations in coming up with proper measures to control the product in the market. Sometimes adverting of a product can lead to future increase in demand of a product. Organizations are supposed to formulate laws that will lead to increase of advertisement of products.

Murray et al (2008) have further argued that demand forecasting can leads to fair difference between supply and demand. Future predictions of demand may results to full use of the available resources in the economy. It can also help in approximating the required materials in future, thereby controlling demand and supply.

According to Montani and Guido (2007) forecasting demand can also help in stabilizing employment.Forecasting may also assist firms to increase its output and control hiring activities. However, there is need for organizations to train skilled person on how to collect and interpret the analyzed data. The firm's managers should learn well the effect of a demand and supply of commodity in the market.

Predicting future demand can reduce the problems experienced with business seasonality's. These problems are very harmful, because they can lead to loss of jobs as well as making the organizations earns less profits (Newman, P .2007). Newman agreed that forecasting plays a major role in determining many organizations policies. The current systems are advanced thus minimizing any risk that may occur.

Demand predications are important in business organizations in various ways. It enables the planning of production to be successful. It is also used in fitting the prices of commodities as well as the purchase of new materials in an industry. Many firms can predicate their supply and quantity to be bought by making their own estimations, using market research specialist (Lawrence E et al, 2007).

2.3 Summary and Research Gaps

A look at the reviewed literature and the empirical literature has shown that indeed, any organization can strive to reduce wastage, time and other aspects of its operation simply by looking at its inventory management system. It is mutually agreed that the organization will have to acquire and hold inventory. However, the system of managing such is key to ensuring that costs and convenience do not suffer as a result. What is not made clear and the focus of this research is the effect the specific inventory management techniques adopted on its overall performance. From this research's perspective, the county governments, recently adopted in Kenya have a chance to improve their

performance by adopting various inventory management techniques. However, the effects of every such technique on the ability of the County governments' ability to deliver the mandated services must be understood. This study tries to fill the gap which is apparent in that no such study has been done before and still some county governments have hardly adopted any discernible inventory management system. Though there is abundant data on the subject of effects of inventory management system on organizational performance, there is hardly any data of the specific effects on such governments. Though one may argue that they (County Governments) are just like any other organization, there is a major difference in that these organizations are first and foremost not profit driven and that they are a very recent creation. As such the effects of say adoption of JIT techniques in inventory management, the adoption of Vender managed inventory, demand forecasting and ERP for instance should be unique to these organizations. This study has filled this gap.

On the other hand, it is not a guarantee that adopting any of these techniques will for instance reduce costs or enhance effectiveness in service delivery. This is borne out of the arguments of several others reviewed who have cautioned that these techniques must be applied and adopted to a specific organization given the business environment it finds itself in. it is a fact that County Governments are in a unique environment and thus the need to understand the effects of these techniques on the organization and not as generalized by various authors.

2.4 Conceptual Framework

Conceptual framework is a diagram showing the relationship between dependent variable and independent variable (Bradley, 2008). In this study it is showing the relationship between the variables of concern.

.

Figure 2.1: Conceptual Framework

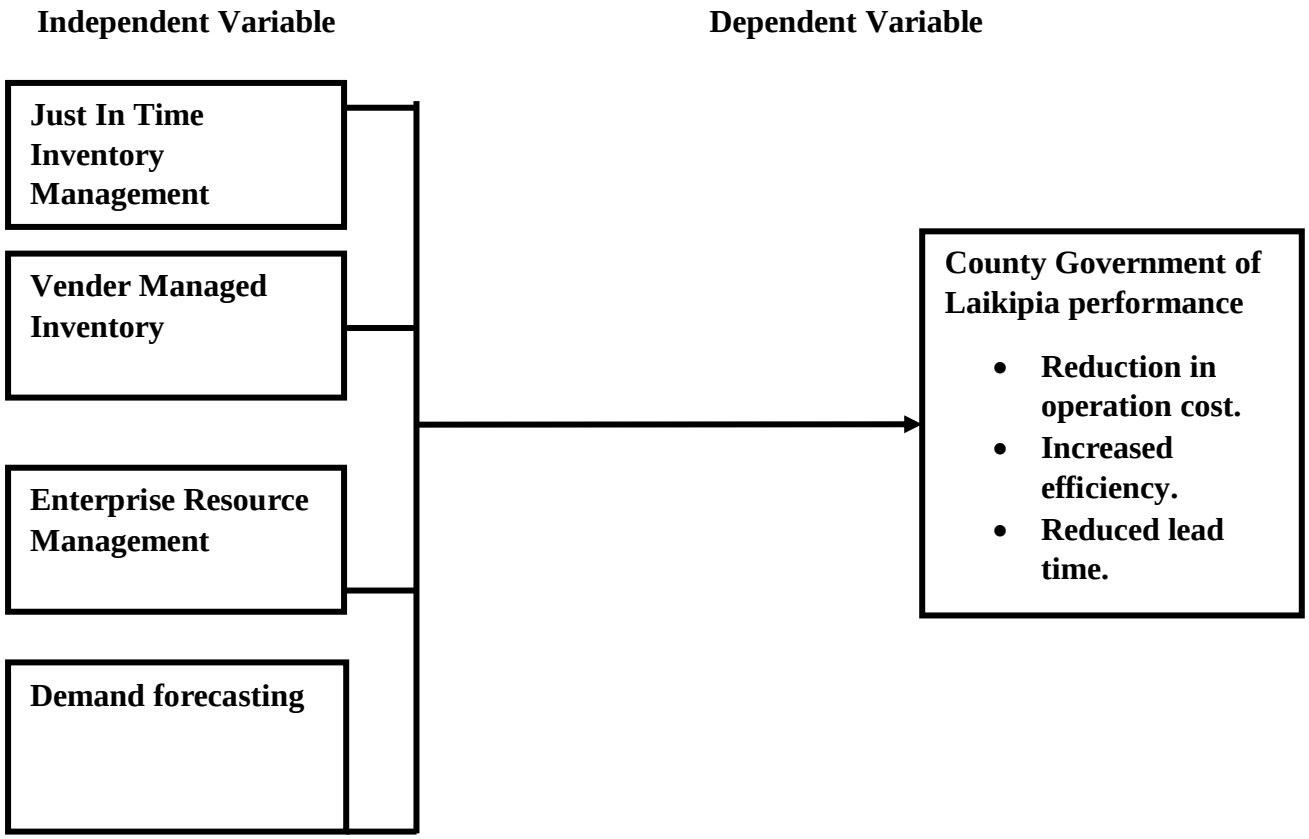


Figure 2.1: Conceptual Frame Work

Adapted from Kitheka (2010)

Just in Time (JIT)

Just in time is one of the modern inventory techniques that can affect the performance County Government of Laikipia. With just in time the inventory costs are reduced which intern lead to reduced operational cost increased efficiency and reduced lead time. The combined benefit will be improved performance in the institution.

Vender Managed Inventory (VMI)

Vendor managed inventory is also another method that can be used by the institutions to improve their performance. The improved performance will be as a result of reduced inventory cost due to reduced zero inventory cost and very short lead time. This also facilitate institutional efficiency and hence performance.

Enterprise Resource Planning (ERP)

Enterprise resource management is another technique which can lead to improved organizational performance. This is due to increased communication with the organization and out of the organization with supplier, which intern lead to reduced lead time and inventory cost. This also leads to efficiency in the organizations and all these lead to improved organizational performance.

Demand Forecasting

Servicing future demand is risky and not certain. The managers of any organizations need to look for best methods to deal with future uncertainties and risks. Hence, any given organizations need to plan for the predicted risks and uncertainties. The aspect of forecasting future demand is postulated to reduce the risks associated with uncertainty leading to improved performance.

2.5 Operational Framework

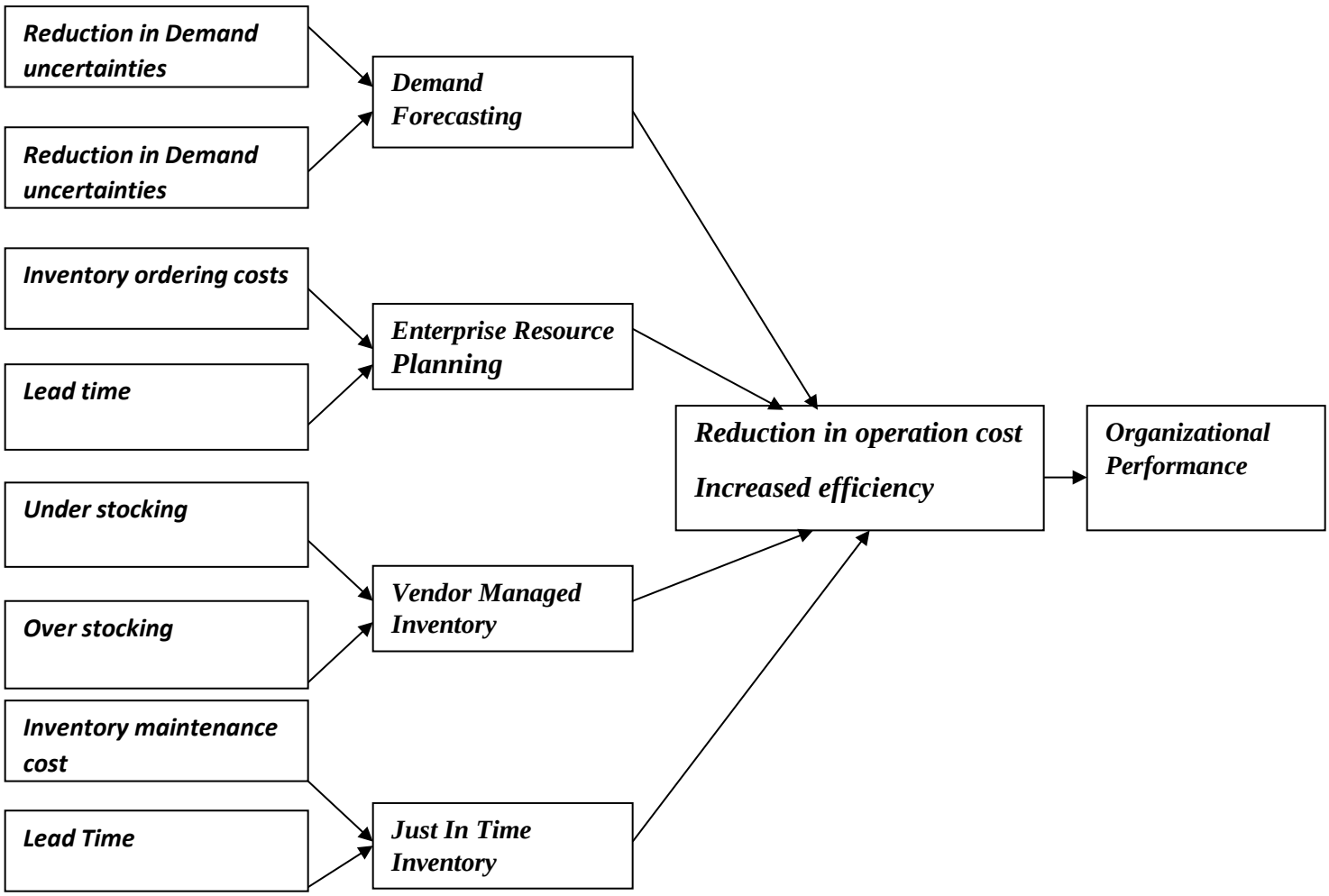


Figure 2.6: Operational Framework

2.6: Chapter Summary

Chapter two has discussed the relevant theoretical literature on inventory management and how the various techniques have influenced how organizations work. In empirical review, the relevant literature on the four factors have been discussed with a view to understanding the factors and how they work before attempting to establish their precise effects on the performance of the CGL.

The chapter has also discussed and presented conceptual framework that gives a visual presentation of how the factors considered work together as postulated in the objectives. Again, the chapter has operational zed the variables through an operational framework in order to come up with a proper picture of how each of the variables interacts with each other as postulated by the research.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

Chapter three focuses on research methodology and design used in the study. The chapter contains research design, target population, research instruments, and ethical issues.

3.1 Research Design

The researcher used descriptive design. This is in accordance to Mugenda and Mugenda 2003 who proposed that research design is best in case study. According to Kothari, 1993 he suggested that research design is best in collecting, compiling, analyzing and interpreting of data. Therefore, the researcher opted to use the research design.

3.2 Target Population

The target population is 60employees who were drawn from the procurement departments as shown in the table. Respondents were drawn from the procurement department of every ward in the county because they are the people who are responsible in the management of inventory in an organization. Every ward has a department charged with procuring goods and services and is staffed by four people. These are the people with had firsthand information required by the researcher for the study.

Table 3.1: Sample Frame

Department	Sub-County	Ward	Target Population
Procurement	Laikipia East	Ngobit	4
		Thingithu	4
		Nanyuki	4
		Umande	4
	Laikipia North	Sosian	4
		Segera	4
		Mgogodo East	4
		Mgogodo West	4
	Laikipia West	Igwamiti	4
		Ol-Moran	4
		Rumuruti-Township	4
		Githiga	4
		Marmanet	4
		Salama	4
		Tigithi	4
Total			**60**

Source: Laikipia County Government HR Department (2017)

3.3 Sampling Procedures and Sample Size

The researcher used census study because the entire population of 60 respondents was targeted. The researcher used census since the target population was very small and the only way to get enough information was to study the entire population.

3.4 Research Instruments

These are the methods which the researcher will use to collect data from the targeted population. The researcher used questionnaires. The researcher used this method of data collection so as to collect first-hand data effectively from the respondents. The use of questionnaire was deemed appropriate as it yielded more honest responses. The researcher used both structured and non-structured questionnaires.

3.5 Piloting

This refers to the pretesting of the research instruments prior to the commencement of the study for the purpose of enhancing its reliability and validity. Orodho (2004) points out that piloting are important because vague questions are identified in the sense that the respondents interpret them differently. Piloting helps the researcher to know whether the questions in the instruments are as well stated and are understood by the respondent as how the researcher would want them understood.

3.5.1 Validity

Mugenda and Mugenda (2003) say that validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. He further says that validity is the accuracy and meaningfulness of influences which are based on research. The researcher issued three respondents drawn from the target population who answered the questionnaires and handed them back to the researcher. The researcher therefore analyzed the findings to determine whether there is any influence of the independent variable on the dependent variable and hence assessed the validity of the data.

3.5.2 Reliability of the Instruments

According to Mugenda and Mugenda (2003) reliability is the ability to consistently produce the same conditions. The validity of the questionnaire will be established in

order to make sure that they reflect the content of the study. The researcher assessed the questionnaires and compared them with the set objectives to ensure that they contained all the information that will answer the set questions and address the objectives. The supervisor will also be consulted to scrutinize the relevance of the questionnaire to the study. The researcher also issued some questionnaires to fellow course mate which assisted him to test the reliability of the questionnaires.

3.6 Data Collection Procedures

The researcher made copies of questionnaires and ensured that they matched the targeted population. Then the researcher distributed the questionnaires to the respondent. Respondent were given a period of two days which was ample time to respondent to the questions because they were busy undertaking their day to day activities. This enabled them to answer questionnaires conveniently. Each respondent was issued with an envelope with which were to carry the questionnaire to protect the instrument from dirt and tear.

3.7 Data analysis and Presentation

Data will be collected through a questionnaire. The collected data is manually analyzed and the results of the analysis presented in tables and charts for ease of use of the data. The study has made use of visual presentation methods-pie charts, tables and diagrams.

3.8 Logistical and Ethical issue

Voluntary consent to participate in the research was obtained from the respondents. Giving their pros and cons of the aspect of participating in the research where good conduct and work relations throughout the research period were adhered to during the study by the researcher. High level confidentiality was maintained. To ensure this the researcher made arrangements that the respondents' were not to write their names in the research document which avoided linking them with specific data. The researcher also responded to enquiries the participants made about the research honestly.

3.9 Chapter Summary

The study has used the questionnaire as the primary data collection tool. The employees of the CGL working in the procurement department have been targeted as the population with a sample drawn from all the targeted population. The questionnaires were distributed by the researcher on a collect later basis. Analysis results will be manual and presentation is in terms of charts and tables.

A pilot study was conducted to guide the researcher in coming up with a final questionnaire that is relevant, reliable and accurate. All relevant ethical and logistical issues have been considered.

CHAPTER FOUR

DATA ANALYSIS AND REPRESENTATION

4.0 INTRODUCTION

The chapter focuses on the presentation of data collected and data collected during the study is analyzed. Data was collected by giving questionnaires. Respondents were issued with questionnaire which they filled to present the information required for the study. The study mainly concentrated on the procurement department which is also mandated to manage inventory.

4.1 Presentation of Research Findings

4.1.2 General Information

The section presents findings of the age, responsibility, gender, work experience, and academic qualification of the respondents targeted in the study.

4.1.3 Response Rate

Researcher issued sixty questionnaires which were all returned, which indicates that the response rate was 100%. As such, any data collected would be deemed as representative of the targeted population.

4.1.4 Distribution according to Gender

Table 4.1: Distribution of the respondent according to age

Gender	***Frequency***	***Percentage %***
Male	*36*	*60*
Female	*24*	*40*
Total	***60***	***100.0***

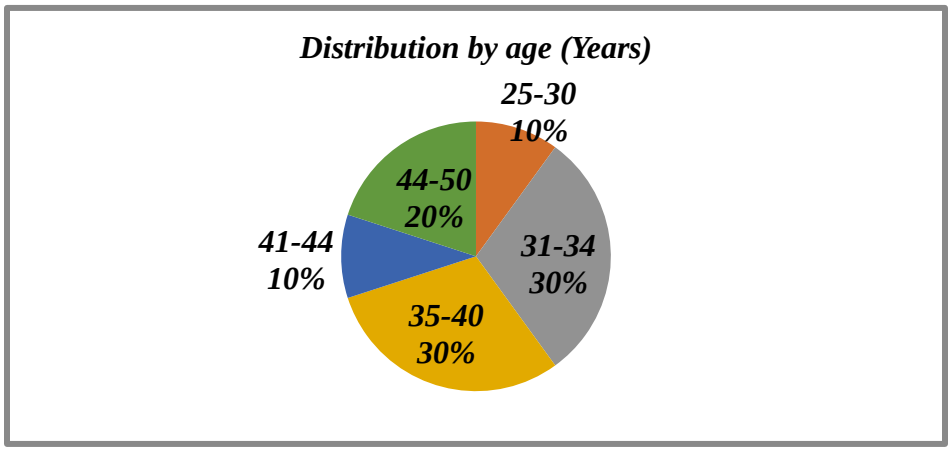
The table 4.1 shows that 60% of the respondents are male while 40% are female. Therefore though the institution is male dominated in this area they have met the two-third rule of the constitution.

4.1.5 Distribution according to age

Table 4.2 Age Distribution

Age in Year	***Frequency***	***Percentage %***
18-24	*0*	*0*
25-30	*6*	*10*
31-34	*18*	*30*
35-40	*18*	*30*
41-44	*6*	*10*
45-50	*12*	*20*
51 and above	*0*	*0*
Total	***60***	***120***

Figure 4.2: Age distribution



From the data analyzed, the majority of the personnel are fairly young between 31-40 years of age which accounts for 60% of the respondents. This is followed by 44-50 years of age accounting for 20% of the population. This data indicates that the institution had mature young people who are also experienced in the field of procurement and store management which is the point of inquiry for this study

4.1.6 Distribution according to education level

Table 4.3: Distribution by Education

Education Level	*Frequency*	*Percentage %*
Primary	*0*	*0.0*
Secondary	*0*	*0.0*
Diploma	*36*	*60.0*
Degree	*24*	*40.0*
Other	*0*	*0.0*
Total	***60***	***100.0***

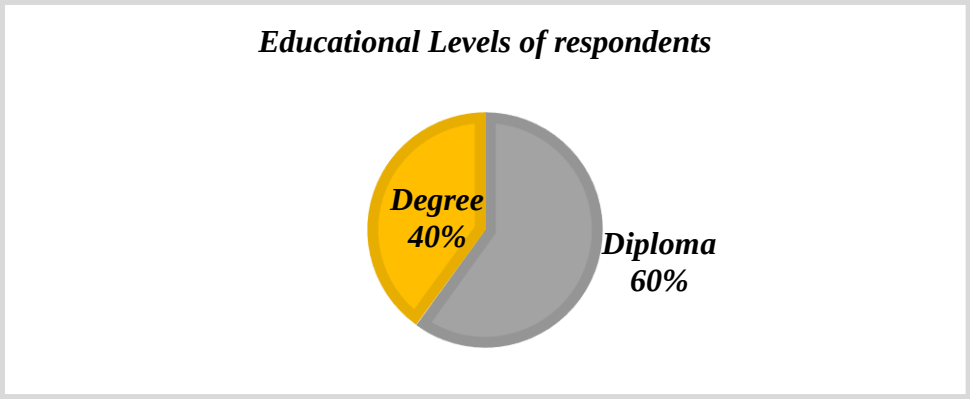


Figure 2.3: Education Distribution

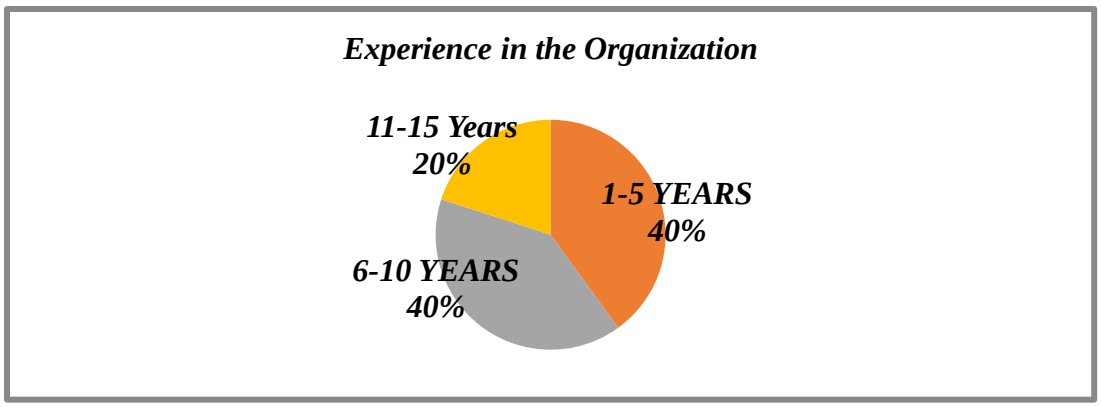
There were 40% and 60% of personnel who had diploma or degree qualification respectively. This indicate that the institution hire employees who are well qualified academically.

4.1.7 Distribution according to experience

Table 4.4: Distribution by Experience

Years of service	***Frequency***	***Percentage %***
Below 1	*0*	*0*
1-5	*24*	*40*
5-10	*24*	*40*
10-15	*12*	*20*
Above 15	*0*	*0*
Total	***60***	***100***

Figure 4.4: Distribution by work Experience



Data analysis indicates that personnel who had 6-10yrs and 1-5yrs experience accounted for 40% in each category. There were no employees who had experience below 1yr and above 15yrs. This indicate that majority of the personnel in the organization had experiences ranging between 1-15yrs.

4.1.8 Effects of just in time on the organization performance

The section analyzes the effects of just in time on the performance of organization by the use of the information provided by the respondents through the use of questionnaire.

4.1.8.1 Deployment of JIT system of procurement in the organization

Table 4.5: Deployment of JIT system of procurement

Application of JIT	*Frequency*	*Percentage %*
High	*30*	*50*
Moderate	*24*	*40*
Low	*6*	*10*

Total	***60***	***100***

Figure 4.5: Deployment of JIT system of procurement

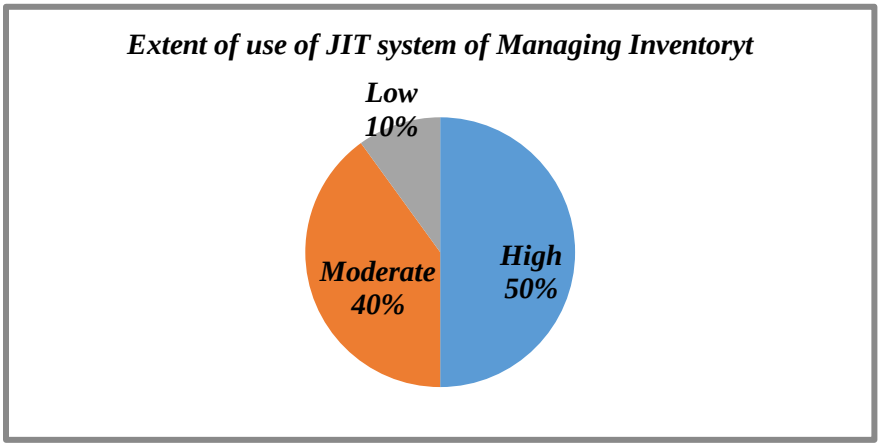


Figure 4.5: Deployment of JIT system of procurement

The distribution was that 40% agreed that the application of just in time was moderate, 20% agreed was low and also 50% agreed that the level of the application was high as well as another 10% agreed that application of just in time was very low. This indicates that majority agreed that in the institution application of just in time was moderate to high. As such, the organization has deployed J.I.T as a system of procurement for some goods.

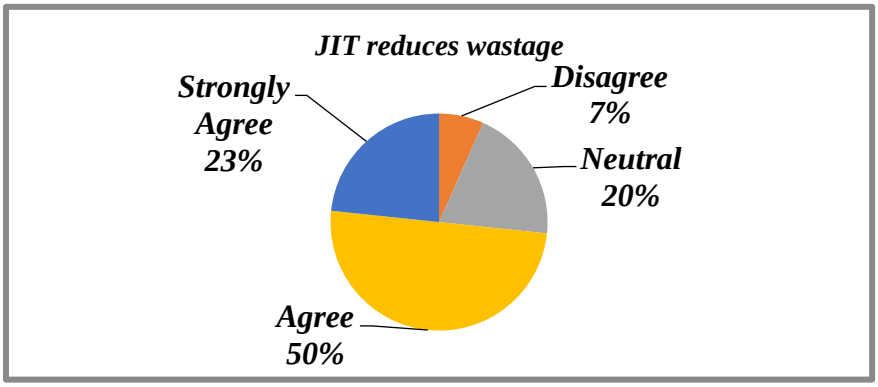
4.1.8.2 JIT and Reduction of Wastage

Table 4.6: Reduction of Wastage in the organization through use of JIT

Statement	***Frequency***	***Percentage %***
Strongly disagree	*0*	*0*

Disagree	*4*	*6.7*
Neutral	*12*	*20*
Agree	*30*	*50*
Strongly agree	*14*	*23.3*
Total	***60***	***100***

Figure 4.6: Reduction of Wastage through use of JIT



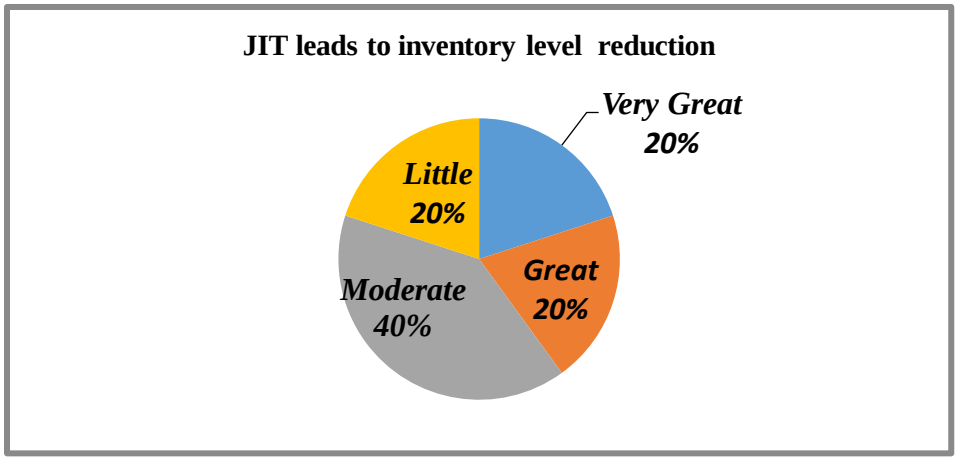
The majority of respondents (50%) agree that the use of JIT reduces wastage, 23% strongly agree while 20% are neutral. Only 7% disagree with the statement that the use of JIT would reduce wastage for the county government.

4.1.8.3 Just In Time and Inventory Level Reduction

Table 4.7: JIT and inventory reduction

JIT leads to Inventory level reduction	***Frequency***	***Percentage %***
Very Great extent	*12*	*20*
Great extent	*12*	*20*

Moderate extent	*24*	*40*
Little extent	*12*	*20*
Not at all	*0*	*0*
TOTAL	***60***	***100***



Data analysis indicate that 20% agreed that just in time lead to reduction of inventory by very great extent also a similar percentage agreed that inventory reduced by a great extent and also 20% agreed that inventory reduced by little extent. 40% agreed that the reduction inventory was moderate. Therefore this indicated that just in time lead to reduction inventory held within the organization.

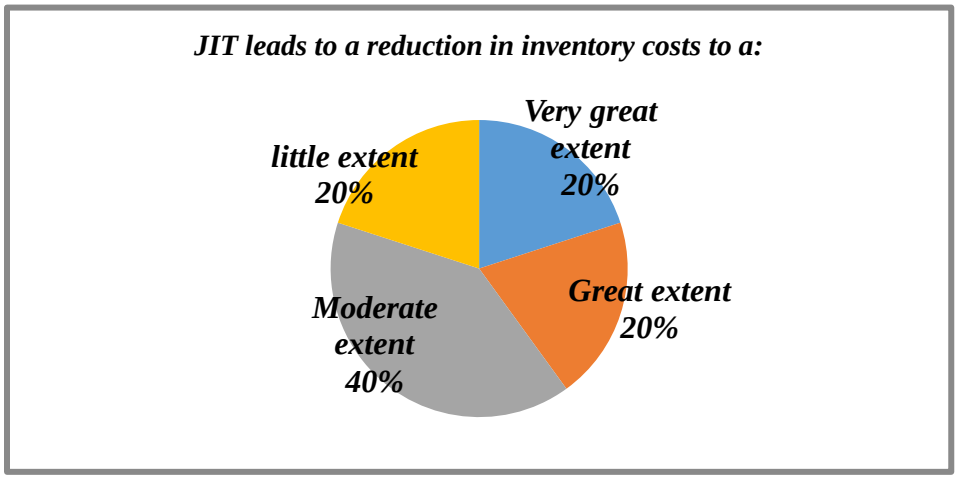
4.1.8.4 Just In Time and Inventory Cost Reduction

Table 4.7: Just in time and inventory costs

JIT reduces inventory costs	***Frequency***	***Percentage %***
Very greatly	*12*	*20*
Greatly	*12*	*20*

Moderately	*24*	*40*
Little	*12*	*20*
Not at all	*0*	*0*
TOTAL	***60***	***100***

Figure 4.7: Just in time and inventory costs



From the data collected and analyzed, 20% of respondents agreed that just in time lead to reduction of inventory cost at a very great extent, a similar percentage for great extent and little extent. 40% agreed that just in time reduced inventory cost in a moderate extent. This indicated that just in time lead to reduction of the inventory cost in the organization.

4.1.8.5 Just in time and Time used to manage Inventory

Table 4.8: JIT and time spent in managing Inventory

JIT reduces Time for Management of Inventory	***Frequency***	***Percentage %***

By a very great extent	*0*	*0*
By a great extent	*0*	*0*
By a Moderate extent	*24*	*40*
By little extent	*24*	*40*
Not at all	*12*	*20*
TOTAL	***60***	***100***

Table 4.8: JIT and time spent in managing Inventory

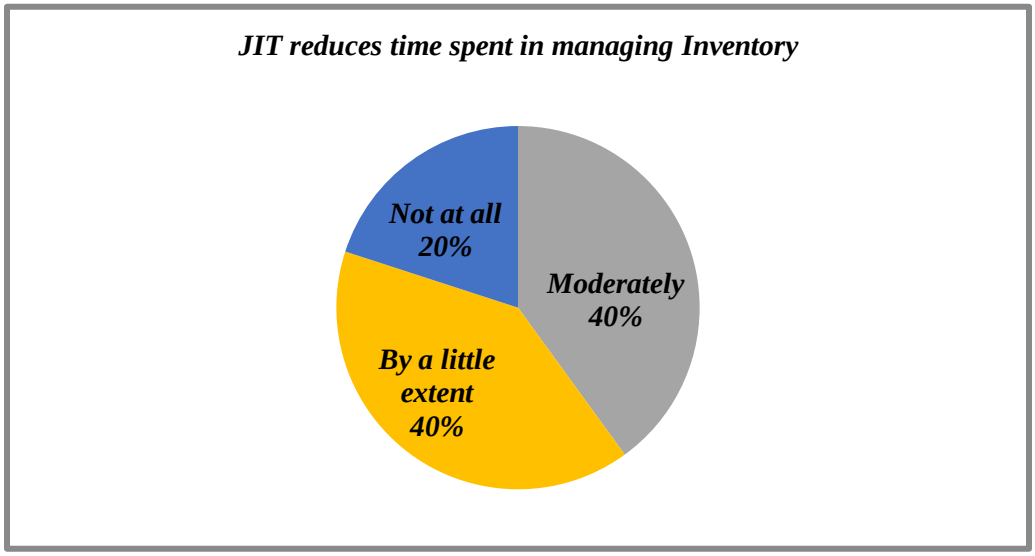


Figure 4.8: JIT and time spent in managing Inventory

The majority of the respondent at (40%) believed that Just In Time lead to reduction of time used to manage inventory by moderate extent while a similar percentage believed that inventory management time is reduced only by little extent.20% believed that there was no effect on the time used to manage inventory in the organization. It is clear that the

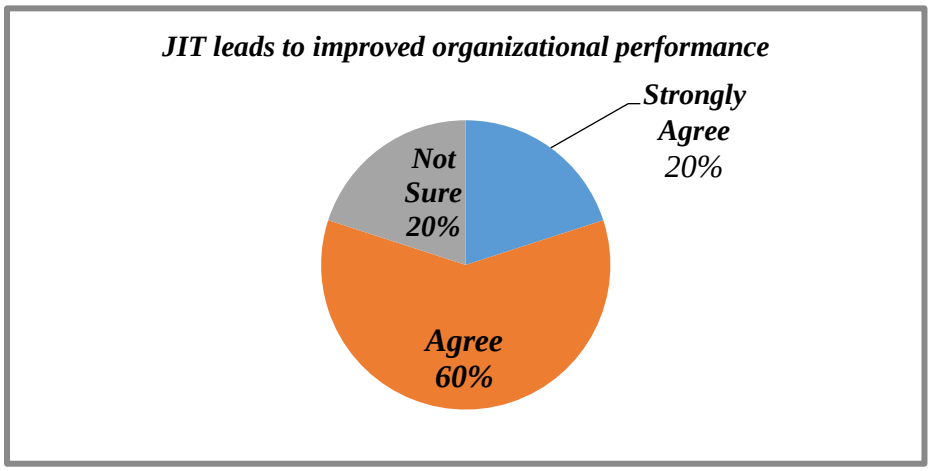
majority of the respondents believed that just in time lead reduction in time used to manage inventory though there are differences in the extent this happens..

4.1.8.6 Just in time and organizational performance

Table 4.9: Just in time and organizational Performance

JIT reduces inventory costs	***Frequency***	***Percentage %***
Strongly agree	*12*	*20*
Agree	*36*	*60*
Not Sure	*12*	*20*
Disagree	*0*	*0*
Strongly disagree	*0*	*0*
TOTAL	***60***	***100***

Figure 4.9: Just in time and organizational Performance



Data collected and analyzed shows that 60% of the respondents agreed that deploying JIT leads to improved organizational performance as a whole while only 20% strongly agreed. 20% were not sure whether there was any improved performance while no one disagreed or strongly disagreed. Therefore most of the respondents agreed that just in time lead to organizational performance as a whole.

4.1.9 Vendor Managed Inventory on Organizational Performance

This section aimed at establishing whether vendor managed inventory leads to improved performance in the organization.

4.1.9.1 Level of application of vendor managed inventory

Table 4.10: Level of application of VMI

Level of application of VMI	***Frequency***	***Percentage %***
Very High	*0*	*0*
High	*0*	*0*
Moderate	*12*	*20*
Low	*36*	*60*
Very Low	*12*	*20*
TOTAL	***60***	***100***

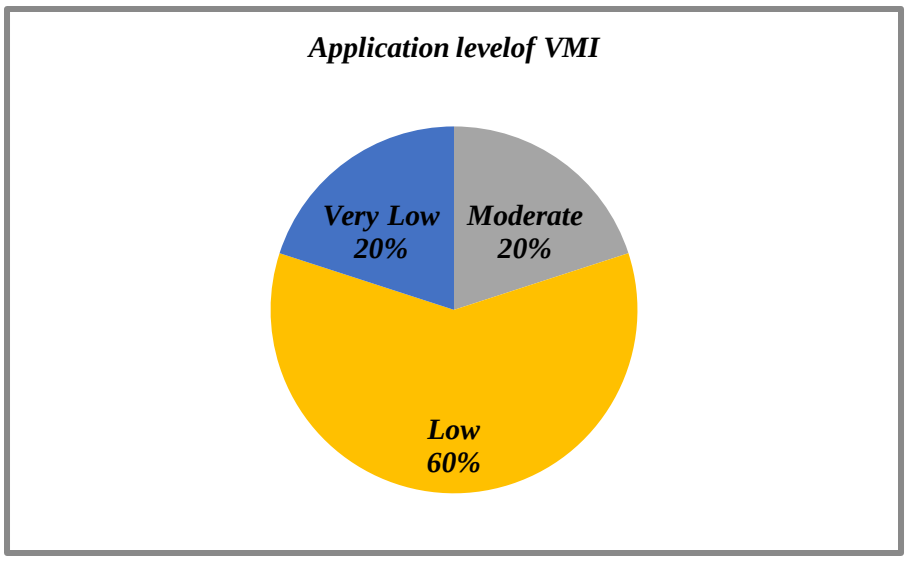


Figure 4.10: Level of application of VMI

On application of vendor managed inventory (VMI), 60% of the respondents are of the opinion that its deployment in the county government was low, with 20% believing that the application was moderate with a similar percentage believing that the application was very low. There were no respondents who believed that the application of VMI was very high or even high. This indicates that most of respondents believed that the application of vender managed inventory was low within the organization.

4.1.9.2 Vendor Managed Inventory and Inventory Levels

Table 4.11: VMI and Inventory Levels

VMI reduces Inventory Levels by	***Frequency***	***Percentage %***
Very Great extent	*0*	*0*
Great extent	*12*	*20*
Moderate	*12*	*20*

Little extent	*24*	*40*
Not at all	*12*	*20*
TOTAL	***60***	***100***

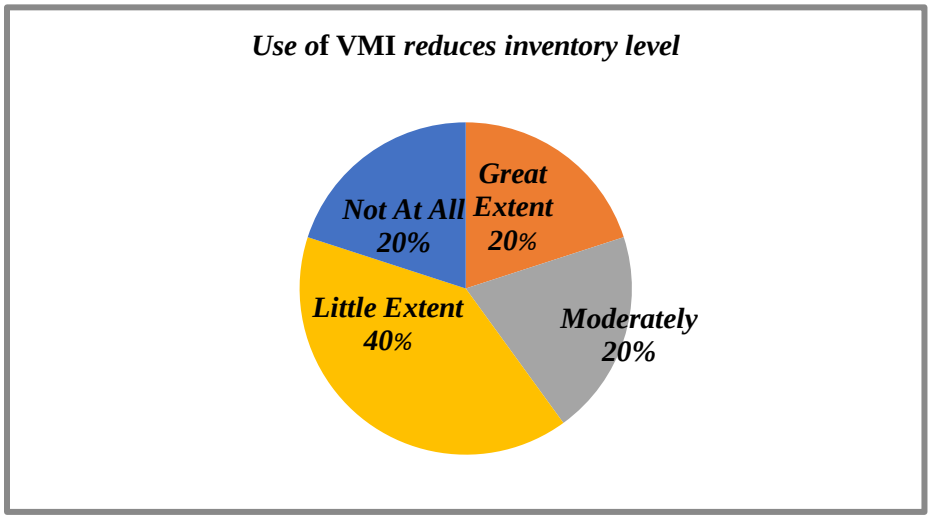


Figure 4.11: VMI reduction of Inventory Levels

Data analyzed indicate that 40% of respondents are of the opinion that by deploying vendor Managed Inventory strategy, the inventory reduced by a little extent, 20% believed that the reduction is moderate with a similar percentage for not at all and great extent. None of the respondent believed that vendor managed inventory brought about a very great reduction in inventory. Therefore those who responded agree that Vendor Managed Inventory reduced inventory through at to a little extent only.

4.1.9.3 VMI and reduction of inventory holding costs

Table 4.12: VMI reduces inventory cost by:

Reduction of holding cost	***Frequency***	***Percentage %***

Very Great extent	*0*	*0*
Great extent	*0*	*0*
Moderate	*24*	*40*
Little extent	*24*	*40*
Not at all	*12*	*20*
TOTAL	***60***	***100***

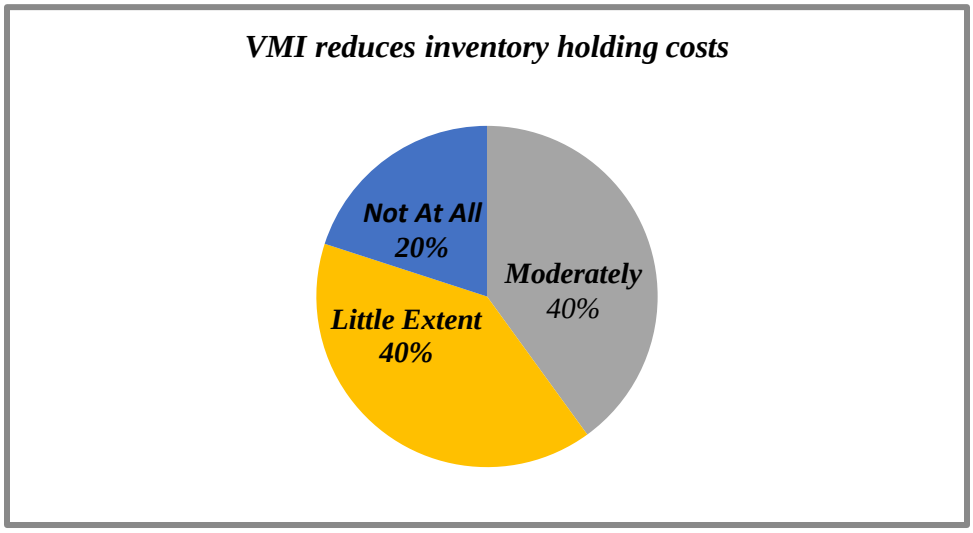


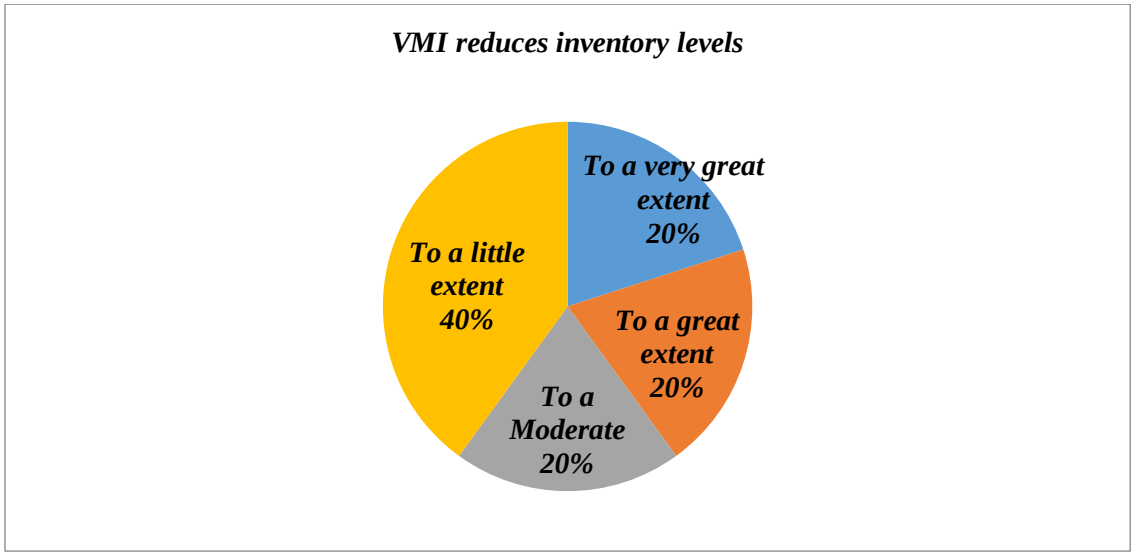
Figure 4.12: Reduction of inventory cost by use of VMI

From the data analyzed and collected, 20% of respondents believed that vendor managed inventory did not lead to reduction of inventory in the organization. 40% believed that it lead to reduction of inventory by a moderate extent with little extent having a similar percentage. None of the respondents believed that this technique leads to reduction in cost by a very great and great extent. The general indication is that most respondent believed that vendor managed inventory brought about a little reduction of cost in the organization.

4.1.9.4 Vendor Managed Inventory and Inventory Level

Table 4.13: VMI and Inventory Levels

Reduction in Inventory Level	*Frequency*	*Percentage %*
Very Great extent	*12*	*20*
Great extent	*12*	*20*
Moderate extent	*12*	*20*
Little extent	*24*	*40*
Not at all	*0*	*0*
TOTAL	***60***	***100***



Vendor managed inventory lead to reduction in inventory level to a little extent is the opinion of40% of the respondents. Another 20% believed that it only leads to reduction of inventory by very great extent and a similar percentage for moderate extent and great

extent. Therefore most of the respondent agreed that vendor managed inventory lead to reduction of inventory levels.

4.1.9.5 Vendor Managed Inventory & Organizational Performance

Table 4.14: VMI and organizational performance

VMI leads to improved performance	***Frequency***	***Percentage %***
Strongly agree	*12*	*20*
Agree	*36*	*60*
Not Sure	*12*	*20*
Disagree	*0*	*40*
Strongly disagree	*0*	*0*
TOTAL	***60***	***100***

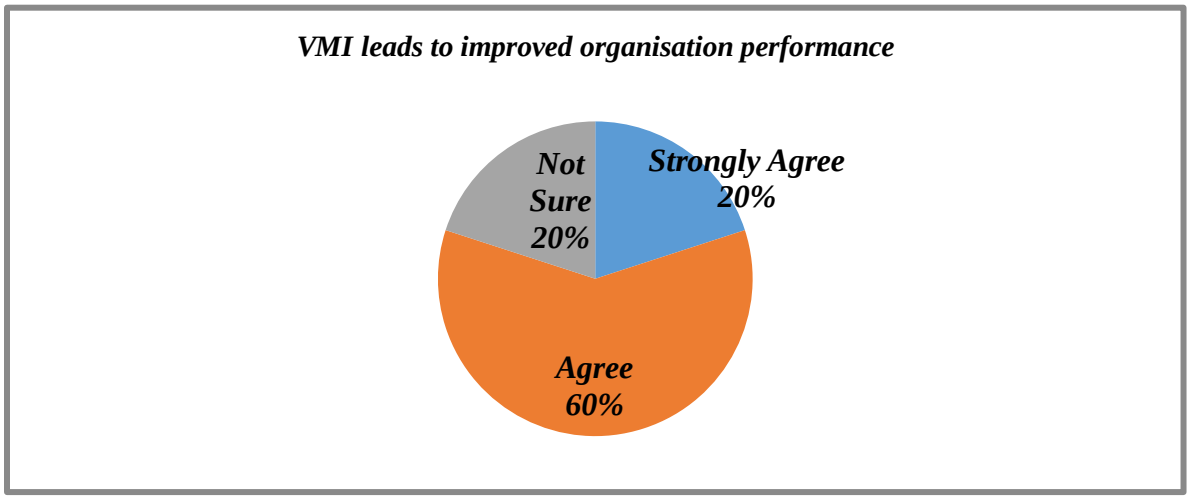


Figure 4.14: VMI and organizational performance

Data analysis shows that 60% of respondents agreed that VMI brings about an improved organizational performance, 20%strongly agreed that there was an improvement in organization with a similar percentage being not sure. None of the respondent disagreed or even strongly disagreed. This indicated that majority in the organization agreed that the vendor managed inventory lead to increased organizational performance.

4.1.10 The Effects of Enterprise Resource planning (ERP) on performance of an organization

This section intended to investigate whether enterprise resource planning (ERP) leads to organizational performance if it is applied in the management of inventory.

4.1.10.1 Level of application of Enterprise Resource Planning

Table 4.15: Level of application of ERP in the organization

Level of Application	***Frequency***	***Percentage %***
Very high	*0*	*0*
High	*12*	*20*
Moderate	*24*	*40*
Low	*12*	*20*
Very Low	*0*	*0*
TOTAL	***60***	***100***

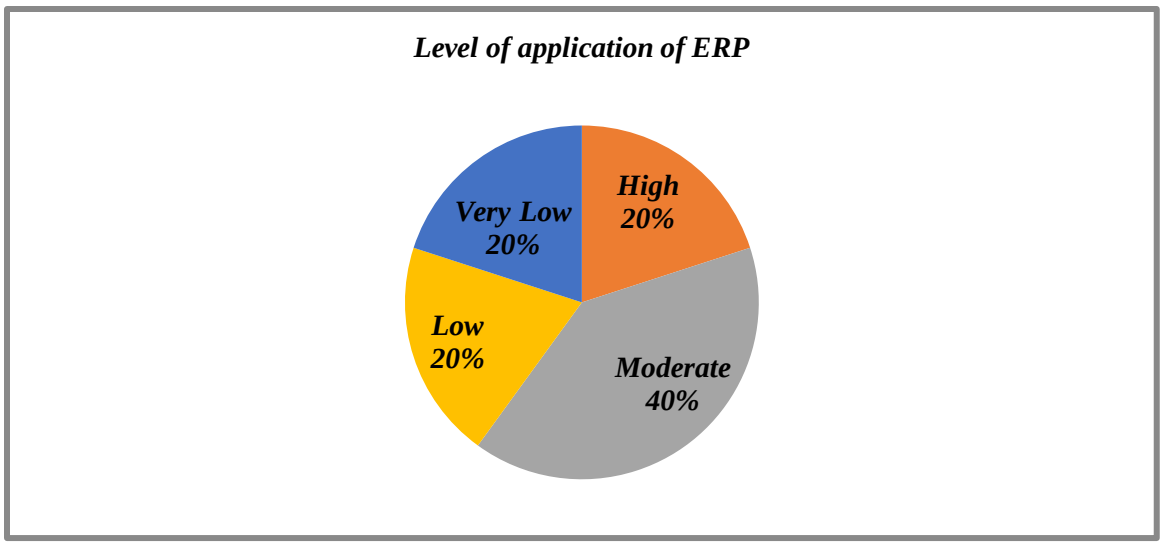


Figure 4.15: Level of application of ERP

Data collected and analyzed indicated that 40% of the respondents believed that application of Enterprise Resource Planning in the organization was moderate,20% of the respondents believed that the level of while some other20% believed that the application was high. None of the respondent believed that the application was very high. The indication is that that most of respondents believed that there was moderate application of enterprise resource planning in the organization.

4.1.10.2 Enterprise Resource Planning and reduction of inventory held

Table 4.16: ERP and inventory level reduction

ERP leads to Inventory Level reduction	***Frequency***	***Percentage %***
Very great extent	*0*	*0*
Great extent	*12*	*20*

Moderate extent	*24*	*40*
Little extent	*12*	*20*
Not at all	*12*	*20*
TOTAL	***60***	***100***

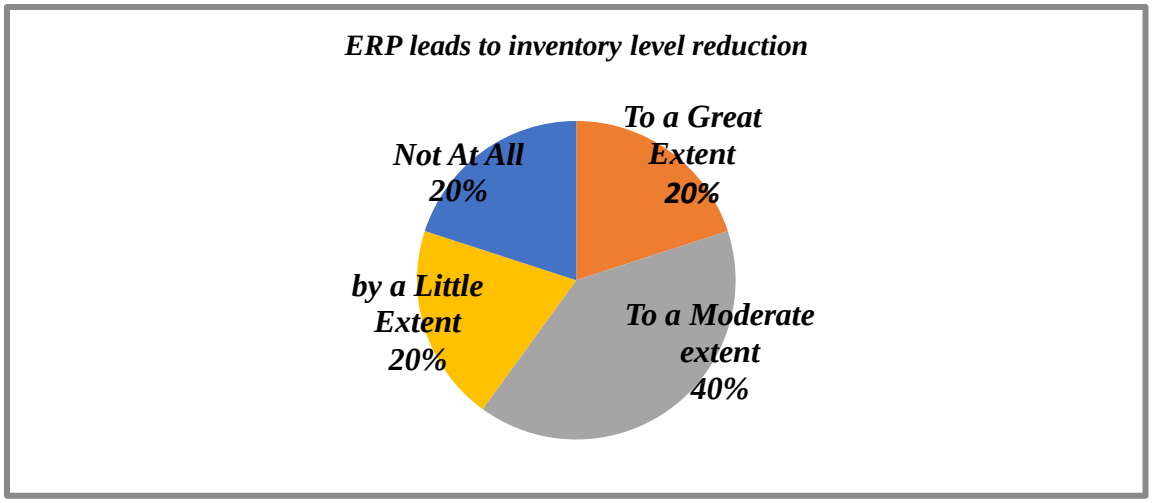


Figure 4.16: use of ERP leads to inventory reduction

Responses obtained indicated that none of the respondents believed that Enterprise Resource Planning brought about reduction of inventory held in the organization. ERP reduces the level of inventory held to moderate extent is the opinion of 40% of the respondents, 20% of those interviewed thought that the use of ERP does not lead to any reduction in inventory levels.

4.1.10.3 Enterprise Resource Planning and reduction of inventory holding cost

Table 4.17: Effects of ERP on inventory holding costs

Reduction in Inventory Holding Cost	***Frequency***	***Percentage %***
Very great extent	*0*	*0*
Great extent	*0*	*0*
Moderate	*36*	*60*
Little	*12*	*20*
Not at all	*12*	*20*
TOTAL	***60***	***100***

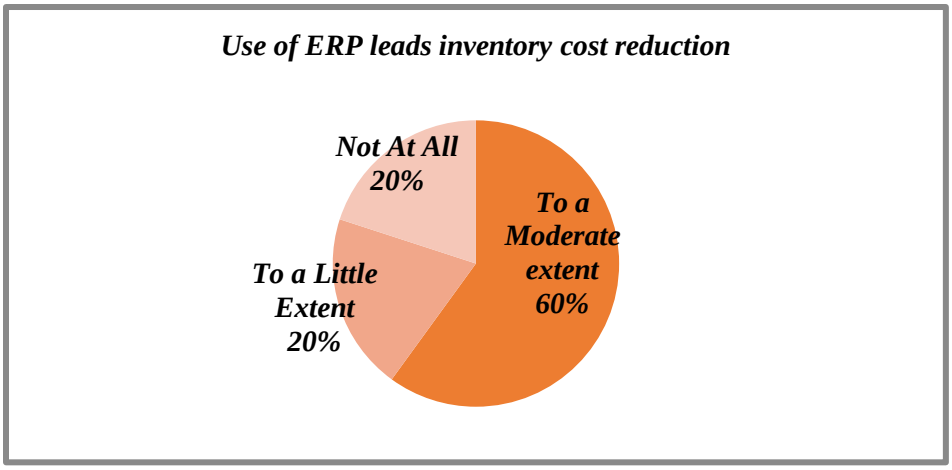


Figure 4.17: Effects of ERP on inventory holding costs

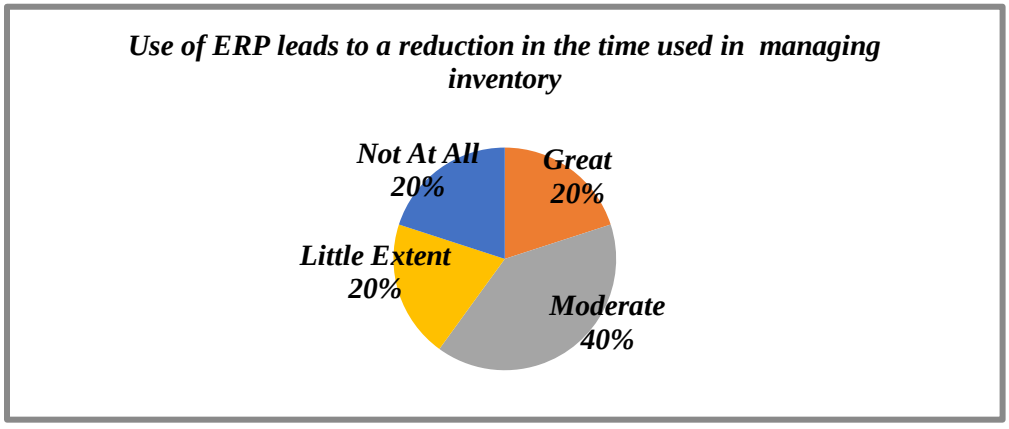
ERP use reduces inventory holding costs by a moderate extent according to 60% of the respondents, it reduces inventory holding costs by little extent according to 20% of the respondents and it does not lead to any reduction of inventory holding costs according to 20% of the respondents. The general indication is that the employment of ERP reduces inventory holding costs.

4.1.10.4 Enterprise Resource Planning and reduction time used in management of inventory

Table 4.18: ERP effect on time used in inventory management activities

Reduction in Time of Inventory Management	***Frequency***	***Percentage %***
Very great extent	*0*	*0*
Great extent	*12*	*20*
Moderate	*24*	*40*
Little extent	*12*	*20*
Not at all	*12*	*20*
TOTAL	***60***	***100***

Table 4.18: Use of ERP reduces time used in inventory management activities



From the data analyzed, 40% of the respondent believed that Enterprise Resource Planning leads to reduction of time used in the management of the inventory by a moderate extent, 20% believed that it reduced the time required to manage inventory by a

little extent and a similar percentage believe that it leads to reduction of time used in inventory management by great extent. At the same time, 20% of the respondents believe that the use of ERP does not lead to reduction of time used on inventory management at all. None of the participants indicated that the effects was to a very great extent. This indicated that majority of the respondent believed that enterprise resource planning reduced the time used to manage inventory in the organization.

4.1.10.5 Effect of Enterprise Resource planning on organizational performance

Table 4.19: ERP leads to improvement of organizational performance

Performance Improvement	***Frequency***	***Percentage %***
Strongly agree	*12*	*20*
Agree	*36*	*60*
Not Sure	*12*	*20*
Disagree	*0*	*0*
Strongly disagree	*0*	*0*
TOTAL	***60***	***100***

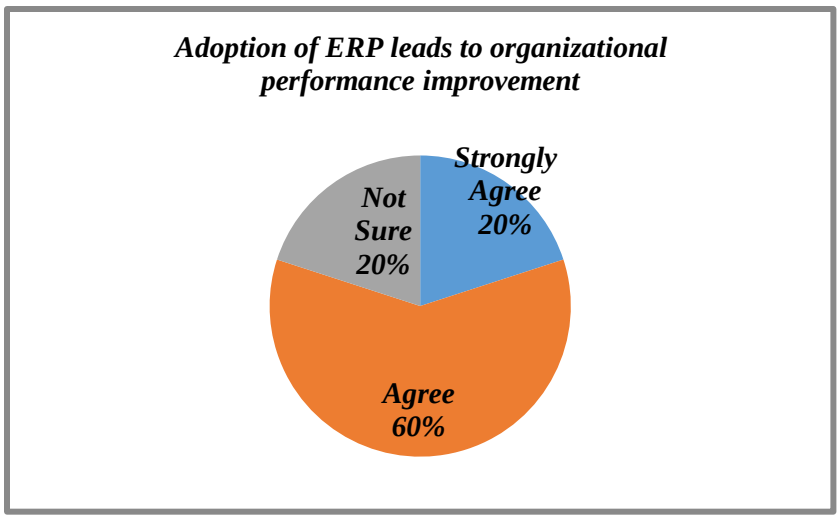


Figure 4.19: ERP leads to improvement of organizational performance

Data analysis indicate that 60% of the respondent agree that Enterprise Resource Planning leads to improvement of organization performance, 20% strongly agree while a similar percentage are not sure. None of the respondent disagrees or strongly disagrees. Therefore it can be noted that all respondent agreed that enterprise resource planning lead to improved performance organization as a whole.

4.1.11 Effects of Demand Forecasting on Organizational Performance

Table 4.20: Level of use of Demand Forecasting

Level of use of Demand Forecasting	***Frequency***	***Percentage %***
Very high	*0*	*0.0*
High	*12*	*20.*
Moderate	*36*	*60.*
Low	*12*	*20*

Very low	*0*	*0*
Total	***60***	***100***

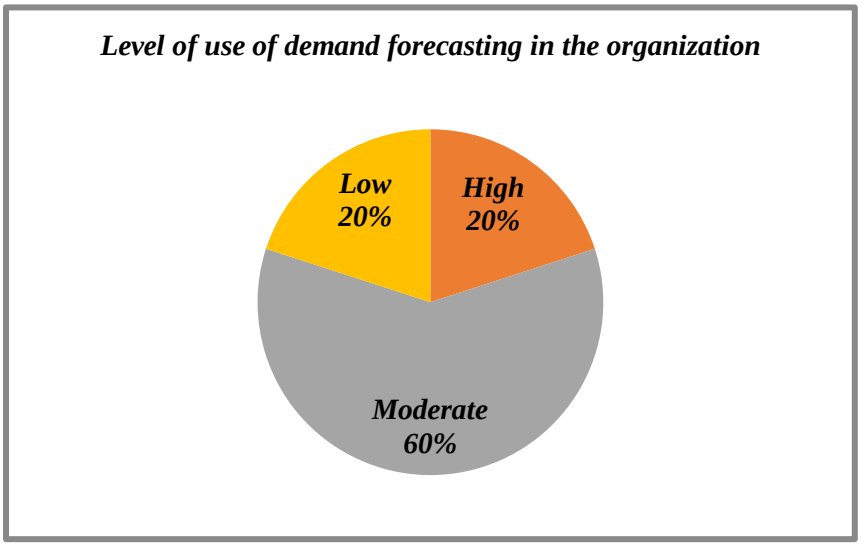


Figure 4.20: Level of use of Demand Forecasting

From the data collected and analyzed, there is general agreement that the organization has embraced the aspect of demand forecasting. The majority of respondents (60%) say that the organization has moderately employed demand forecasting, 20% say that the level of use of Demand forecasting is high while 20% say that the level of use of demand forecasting is low**.** The general indication is that the organization uses demand forecasting as a means to manage its inventory.

4.1.11.1 Effects of demand forecasting on reduction of wastage

Table 4.21: Forecasting demand leads to reduced Wastage

Reduction of wastage through forecasting demand	***Frequency***	***Percentage***

Very high	*0*	*0*
High	*36*	*60*
Moderate	*12*	*20*
Low	*12*	*20*
Very low	*0*	*0*
Total	***60***	***100***

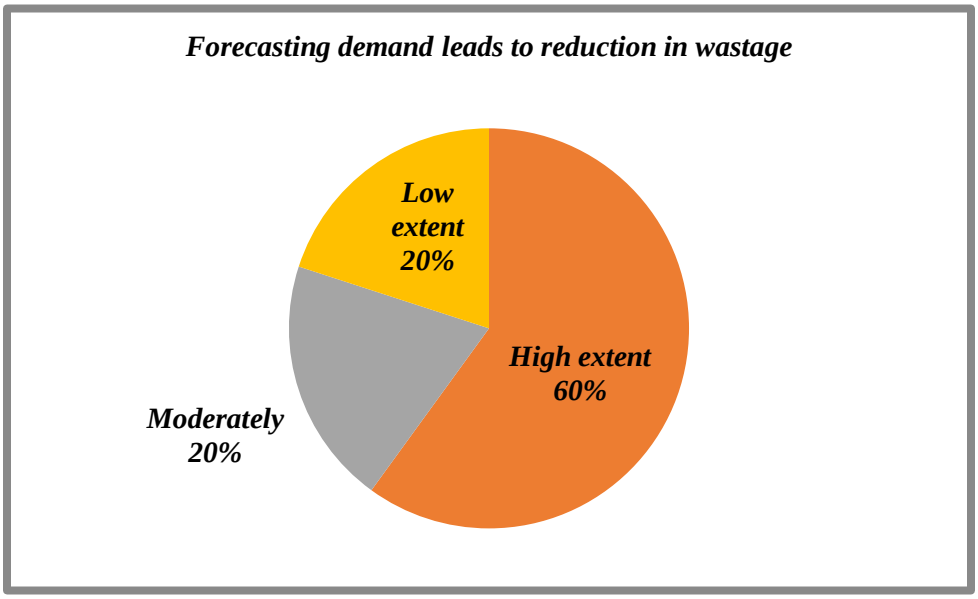


Figure 4.21: Forecasting demand leads to reduced Wastage

Demand forecasting reduces wastage. This is the opinion of 60% of the respondents who say that demand forecasting reduces wastage by high extent, 20% believe that the reduction is moderate while another 20% of the respondents think that the reduction is low. As such, the use of demand forecasting reduces wastage in the organization.

4.1.11.2 Forecasting demand and inventory holding costs

Table 4:22: Forecasting demand leads to reduction of inventory holding cost

Forecasting demand leads to Reduction in Inventory Holding Cost	***Frequency***	***Percentage***
Very great extent	*36*	*60.0*
Great extent	*12*	*20*
Moderate	*12*	*20*
Low	*0*	*0.0*
Not at all	*0*	*0.0*
Total	***60***	***100.0***

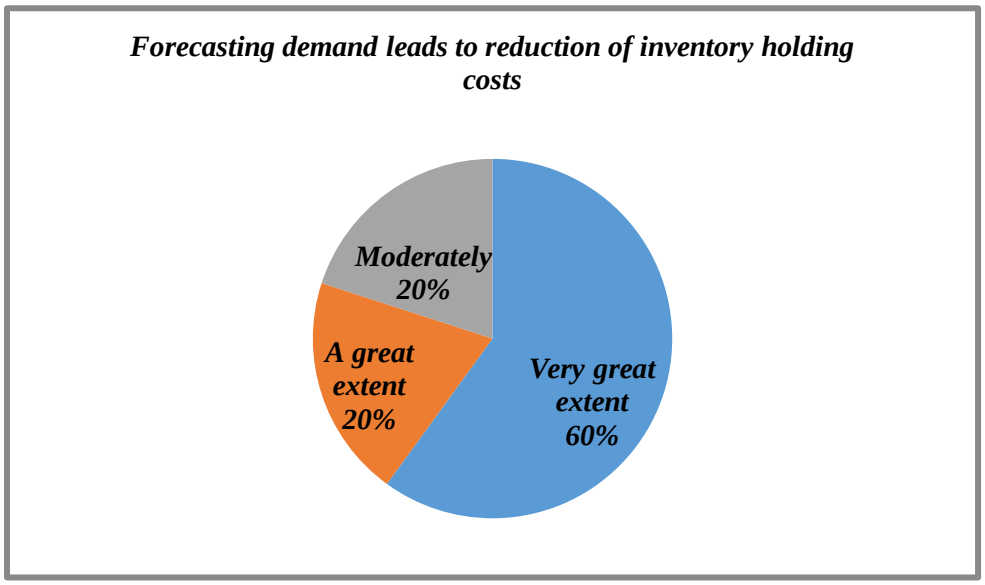


Figure 4:21: Forecasting demand leads to reduction of inventory holding costs

Forecasting demand reduces inventory holding costs by a very great extent according to 60% of the respondents. It reduces inventory holding costs by little extent according to 20% of the respondents and it does lead to cost reduction to a moderate extent according

to 20% of the respondents. The general indication is that the use of Forecasting demand reduces inventory holding costs.

4.1.11.3 Forecasting Demand and improvement of performance in the organization as whole

Table 4.23: FD and organizational improvement

Forecasting demand leads to Performance Improvement	***Frequency***	***Percentage***
Strongly agree	*36*	*20*
Agree	*12*	*60*
Not sure	*12*	*20*
Low	*0*	*0*
Not at all	*0*	*0*
Total	***60***	***100***

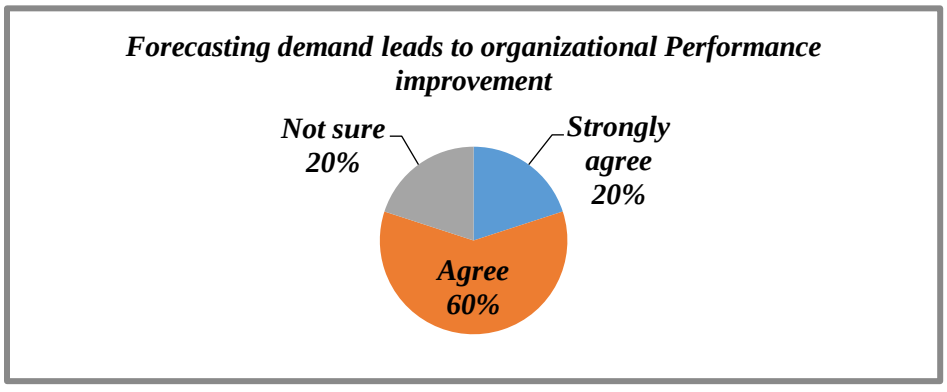


Figure 4.22: Forecasting Demand and organizational performance improvement

Data analysis indicate that 60% of the respondent agree that forecasting demand leads to improvement of organization performance, 20% strongly agree while a similar percentage are not sure. None of the respondent disagrees or strongly disagrees. Therefore it can be noted that all respondent agreed that enterprise resource planning lead to improved performance organization as a whole.

4.2 Limitations and Delimitations of the Study

The researcher met uncooperative respondents who were not willing to provide all the relevant information. Some respondent also found it difficult to answer some questions due to increased work load in their respective positions and duties. It was also difficult for the researcher to access Top Management because of the bureaucratic requirements. To counter this, the researcher assured the respondents of the importance of the study and confirmed to them that any information was to be treated with the privacy it deserves.

The researcher also issued the questionnaires to the respondent and collected them after two days so as to give them enough time to have them answered. Also, the researcher sought appointments with the Senior Managers and had authorization by the leadership.

The study was limited to respondents in procurement, specifically the area of inventory management. In this case it is the procurement department which is mandated with the management of inventory and therefore had the ability to offer relevant information for the study.

4.3 Chapter summary

Chapter four has presented the analysis of the raw data in terms of charts and tables and also given the major and minor statistics for every response to every question. The data is presented as per the questionnaires. The questionnaires were designed to meet the researcher's objectives after analysis. There is an interpretation of what the statistics mean or indicate.

The chapter has also discussed the limitations as encountered during the study. The researcher also explains how such limitations were handled to enable him to make the conclusions and therefore complete the study.

CHARPTER FIVE

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter covers the findings and after analyzing the collected data through questionnaires from respondents in the procurement and store department. It further contains the study's conclusion, discussion and also suggests recommendations and the need for further research.

5.1 Summary of the Findings

As per the finding of the researcher, the County Government had implemented the four techniques of inventory management albeit in a limited way. The application techniques, such as Just in Time (JIT) Vendor Managed Inventory (VIM), Enterprise Resource Planning (ERP) techniques and the use of Demand Forecasting in the management of inventory was very moderate to high. JIT inventory management system has very significant and positive effects on the performance of the County Government. This is caused by the fact that the County does not need to have large quantities of various commodities in its stores. JIT leads to a decrease in the time and staff involved in the management of the inventory which means savings on costs of managing inventory. Again, due to the fact that inventory comes in only when needed, losses through damage, deteriorating in quality, theft by employees are almost nonexistent. The inventory holding cost decreased due to low inventory held within the organization. Though the application of this technique was low it showed that the inventory held in the organization decreased

moderately as a result. There was also, to some extent general improvement of the organization performance as a whole.

The study has also established that Enterprise Resource Planning (ERP) was not well integrated between the store and other department which made its effectiveness not felt in management of inventory. As such, ERP has very little significance in the performance of the Organization as a whole.

The organization reaps big in cases where there is Vendor Managed Inventory. However, there are only a few areas where this is practicable. This technique if it was applied across the whole range of items in inventory will definitely lead to lowering of such costs as ordering and maintenance of inventory. Such would result in the county being able to render its services more effectively.

Demand forecasting is central to the ability of the county to render services. Through it, shortages would be less experienced as would over ordering and thus overstocking of certain items. However, the county needs to use this method for all items. There is very strong evidence that the county could benefit more if it had foreknowledge of what was needed and the quantities needed. The study pints out that the ability of the county to render services would increase.

It was also clear that the combination of these techniques in the management of inventory lead to decrees in the time used in the management of inventory.

5.2 Recommendations

Though Just in Time, vendor managed techniques and enterprise resource planning techniques are used in the management of inventory they can never give results if they are used on their own. They should be collaborated together so as to ensure they work toward a common goal. Also other inventory management techniques should not be ruled out but they should be used together with these techniques so as to derive the maximum possible benefits. Also other cost based approach such as activity based approach where costs are ascertained according to the cost incurred in the process. This will make the application of these techniques easily applied since as the management tries to minimize activity costs, it will also go ahead and minimize inventory costs through the application of these inventory management techniques.

The organization should try to implement fully these techniques so that it can reap the maximum benefits from these techniques. Again, the organization should enhance its communication with suppliers so as to ensure the full applicability of just in time within the organization.

There should be collaboration of all the departments within the organization so as to ensure the organization use Enterprise Resource Planning technique in the management of the inventory through use of user department.

The institution should ensure that all the techniques should be used in way that no duplication of activity occurs within the organization.

The organization should ensure that it identify suppliers who are close to it so as to ensure that just in time is more applicable.

5.3 CONCLUSIONS

The study main purpose was to find out the effects of inventory management techniques in the performance of an organizational. These techniques were namely; just in time, vendor managed inventory, and enterprise resource planning. The main advantage of the techniques were lower inventory holding cost, lower the time required to manage inventory, lower the inventory held in the organization, enhance communication with the suppliers as well as within the origination and also lower inventory administration cost within the organization. Therefore the use of these inventory management techniques in the organization is the best way for institutions to go in the management of inventory.

REFERENCES

Angulo, A., Nachtmann, H., Waller, M.A., 2004. Supply chain information sharing in a vendor managed inventory partnership. *Journal of Business Logistics*, 25(1), pp. 101-120.

Baily, P., Farmer, D., Barry, C., Jessop, D., & David, J. (2008). *Procurement principles and management*. Harlow: Pearson Education.

Balsmeier, P. and Nagar, S. (2002), *"Implementing ERP in India",* Journal of

Beheshti, H.M., 2006. What managers should know about ERP/ERP II.*Management Research News*, 29(4), pp.184-93.

Booth et. al, (2002), *"Effective Use of Technology",* Journal of Management *Productivity: Assessment Issues'',* in L. Willcocks and S. Lester (eds), Beyond the IT

Carlson, J. G. (2002). *Just-in-time approach to system wide efficiency and quality borrows from industrial techniques*, Strategies for Healthcare Excellence, 6(2), 9-12.

Emmett, S., & Granville, D. (2007). *Excellence in inventory management*. Cambridge: Cambridge Academic.

Farrington, B., & Lysons, K. (2006). *purchasing and supply chain management*. London: Pearson Education.

Fawcett, S. E., Ogden, J. A., Magnan, G. N., & Cooper, M. B. (2006). *Organizational commitment and governance for supply chain success*. International journal of physical distribution and logistics management, 36, 22-35.

Frahm, S. (2003, March 05). *Vendor Managed Inventory (VMI): Three Steps in Making It Work*. Retrieved May 12, 2013, from Pertinent and Timely Articles to Cultivate Your SCM Knowledge: http://scm.ncsu.edu/scm-articles/article/vendor-managed-inventory-vmi-three-steps-in-making-it-work

Goldratt, M. E. (2004). *The Goal: a process of ongoing improvement*. New York: North River Press.

Hendricks, K.B., Singhal, V.R. & Stratman, J.K., 2007. The impact of enterprise systems on corporate performance: A study of ERP, SCM and CRM system implementations. *Journal of Operations Management*, 25, pp.65-82.

Katerrattanakul, P., Hong, S. and Lee, J. (2006), "*Enterprise resource planning survey of Korean manufacturing firms"*, Management Research News, Vol. 29 No.

Kazim, S. (2008). *Inventory inaccuracy and performance of collaborative supply chain practices*. Industrial management and data systems, 108, 495-509.

Ken Laudon et al, (2010), *Management Information Systems, Managing the Digital Firm*, Pearson Education Ltd. New Delhi, India

Kitheka, S.S. (2010). Inventory management automation. *International Journal of Research in Management & Business Studies (IJRMBS 2014)* vol. 1 No4, pp 9-14.

Kothari, C.R. (1995). *Research methodology*: Methods and techniques. New Delhi: New Age International Ltd Publishers.

Mugenda, O.M., & Mugenda, A.G. (2003). *Research Methods*: Quantitative and Qualitative Approaches. Nairobi: Acts Press.

Murray, M., 2006. *SAP MM: Functionality and Technical Configuration (2nd Edition)*. Fort Lee (NJ), USA: Galileo Press - SAP Press.

Paradox, John Wiley & Sons, Chichester: 60-97.

Rushton, A., Croucher, P., & Baker, a. P. (2011). *The handbook of logistics and Distribution Management*. London: Kogan page ltd.

Spathis, C. and Ananiadis, J. (2005), *"Assessing the benefits of using an enterprise system in accounting information and management",* Journal of EnterpriseInformation Management, Vol. 18 No. 2, pp. 195-210

APPENDIX II: QUESTIONNAIRE

This questionnaire consists of four sections; kindly answer all the questions by ticking in the appropriate box or filling in the spaces provided.

Section A: General Information

1. What is your Gender?

(a) Male [ ]

(b) Female [ ]

2. What is your age bracket (Tick whichever appropriate)

(a) 18 – 24 Years [ ]

(b) 25 - 30 Years [ ]

(c) 31 - 34 years [ ]

(d) 35 – 40 years [ ]

(e) 41 – 44 years [ ]

(f) 45 – 50 years [ ]

(g) Over 51 years [ ]

3. What is your education level? (Tick as applicable)

(a) Primary [ ]

(b) Secondary [ ]

(c) College [ ]

(d) Bachelors' degree [ ]

(e) Others-specify.....

4. Years of service/working period (Tick as applicable)

(a) Less than 1 year [ ]

(b) 1-5 years [ ]

(c) 5-10 years [ ]

(d) 11-15 years [ ]

(e) 15 years and above [ ]

SECTION B: Just In Time

5. The following are statements on the effects of employing Just in Time technique in the management of inventory for various goods in your organization. Indicate your level of agreement on the statement by Putting a tick where appropriate 1= strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Statement	**1**	**2**	**3**	**4**	**5**
Using JIT reduces wastage in this organization?					
Using JIT increases productivity of staff					
Use of JIT leads to shortages					
just in time lead to reduction of inventory					
just in time lead to reduction of inventory holding cost					
just in time lead to reduction of time used in the management of inventory					
Just in time has led to the improved performance of organization as whole?					

SECTION C: Vender Managed Inventory (VMI)

6. The following are statements on the effects vendor managed Inventory (VMI) technique in management of inventory in your organization. Indicate your level of agreement on the statement by Putting a tick where appropriate 1= strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

statement	**1**	**2**	**3**	**4**	**5**
VMI leads to increased productivity of staff ii this organization					
VMI leads to reduction of inventory levels in your organization					
VMI leads to reduction of inventory holding costs for this organization					
VMI leads to reduction of time used in the management of inventory					
VMI has led to the improved performance of organization as whole					

SECTION D: Enterprise Resource Planning (ERP)

7. The following are statements on the effects Enterprise Resource Planning (ERP) technique in management of inventory in your organization. Indicate your level of agreement on the statement by Putting a tick where appropriate 1= strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Statement	**1**	**2**	**3**	**4**	**5**
ERP leads to reduction of inventory in your organization					
ERP leads to reduction of inventory holding cost					
ERP leads to reduction of time used in the management of inventory					
VMI has led to the improved performance of organization as whole					
ERP lead to reduction of time used in the management of inventory					

ERP has led to the improved performance of organization as whole					

SECTION E: Demand Forecasting

8. The following are statements on the effects forecasting Demand technique in the management of inventory in your organization. Indicate your level of agreement on the statement by Putting a tick where appropriate 1= strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Statement	**1**	**2**	**3**	**4**	**5**
Forecasting demand reduces the instances of shortages in this organization					
Forecasting demand leads to reduction of inventory levels in your organization					
Forecasting demand leads to reduction of inventory holding cost					
Forecasting demand leads to reduction of time used in the management of inventory in this organization					
Forecasting demand has led to the improved performance of organization as whole					

APPENDIX III: WORK PLAN

The researcher adopted the following work plan so as to complete the research project within the stipulated period.

Activity	**June**	**July**	**Aug**	**Sept**	**Oct**
Identification of research problem	✓				
Presentation of research topic		✓			
Presenting chapter one, two and three			✓		
Collection of error in the proposal			✓		
Research instrument submission			✓		
piloting			✓		
Data collection			✓		
Data analysis				✓	
Submission of chapter four and five					
Correction of the report					✓
Final submission					✓

APPENDIX III: COST BUDGET

The researcher incurred the following expenditures during the undertaking of the research project.

Activity	**KSHs.**
Printing and photocopy	4,000.00
Stationery and binding	3,000.00
Internet	2,500.00
Travelling	2,000.00
Contingency	2,500.00
Total	**14,000.00**